

Ready to Expand Your EV Offerings?

By Daniel Ciarcia, LEED GA

IF YOU'VE JOINED A GROWING NUMBER OF GARAGE OWNERS and operators by installing electric vehicle (EV) charging stations, you've likely noticed demand for these stations increasing. With sales of EVs in the U.S. surging 45 percent from 2016 to 2017 and patrons competing for those once-empty EV spaces, you may be considering expanding your EV charging offerings. That's good news for your business growth, but first you'll need to decide how to cost-effectively supply power to these stations and whether it's time to move to a fee-based service.

Electrical Infrastructure Needs

Garage operators may get sticker shock from the hidden electrical infrastructure costs of adding EV stations. Typical costs to upgrade the charging infrastructure can run upwards of \$4,000 for each new charging station, in addition to the charging equipment. Before you commit to upgrading your infrastructure, there are alternatives to consider.

First, you'll want to assess all of the power needs across your facility and look for ways to improve efficiency. For example, upgrading lighting or improving HVAC systems can free up enough excess power supply to eliminate the need for an electrical upgrade. At The Parking Spot properties, Vice President of Development Mike Boyle found, "Converting high-wattage metal halide lighting to LED lighting frees up enough electrical capacity to install EV charging stations without requiring any electrical infrastructure upgrade."

Another strategy for expanding EV charging while minimizing infrastructure costs is to ration the power delivered to vehicles according to need. Vehicle arrival and departure times typically vary, and not all vehicles will require the same level of charge, so allocating electricity according to demand can minimize the need for electrical upgrades. A variety of technical power management solutions are

available with varying degrees of complexity, features, and price points.

For parking facilities offering valet service or with parking attendants, EVs can be charged efficiently with fewer stations, reducing the infrastructure upgrade costs. When one vehicle is completely charged, another can be swapped in immediately, enabling the facility to use the charging stations continuously and reduce the needed EV charging hardware.

Access Options

It's likely that you installed your first charging stations with no fee to use. Depending on how much you'll be spending on additional stations, you're probably considering whether to start collecting payment but may be unsure what's involved.

Vendors offer a wide variety of access options.

Fee-based charging stations cost more to purchase and typically carry a monthly network fee. Most EV vendors provide a pay-by-phone payment option using a stored credit card, eliminating the need for a card swipe or printed receipts. This strategy can work well if the stations are installed in a public lot.

Other hardware options enable RFID card, Bluetooth, and PIN-code access to charging stations, including the option of collecting payment through employee payroll systems.



If your facility uses a parking access revenue control system (PARCS), you can add your EV charging stations to a VIP area and charge a premium for that parking, without adding access-control hardware or software.

Understanding the cost of implementing a fee-based EV system will help you balance this overhead against the business and marketing benefits of providing free charging. Even today's larger capacity batteries only consume about \$2-4 of electricity per charge. You may find that greater customer demand and loyalty outweigh the expense of free charging.

A long-term strategy for delivering a convenient EV solution will enhance your business, encourage cleaner electric mobility, and increase your facility's visibility. [P](#)



DANIEL CIARCIA, LEED GA, is founder of Two Willows Consulting and a member of IPI's Sustainability Committee. He can be reached at dan@twowillowsconsulting.com.